REVIEW

- ICD Installation & Commissioning
- Calorimeter Commissioning
- Data Acquisition Expert
- Missing Tranverse Energy
- Electroweak Physics
- Plans For Next Year

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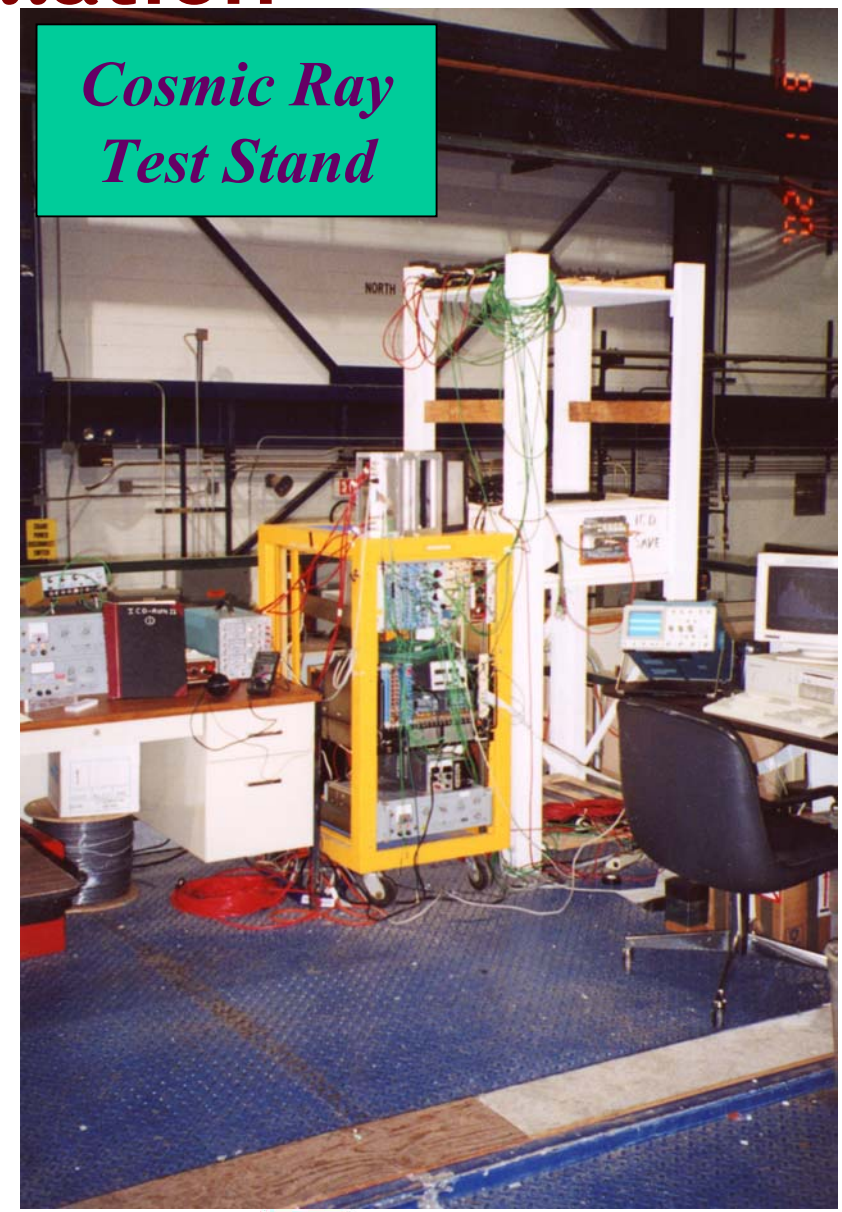
ICD Installation

- Characterization of tile modules, fibers & PMTs on test stand
  - Mounted tiles & fibers in detector (EC faces)
- Populated ICD crates
  - Electronics drawers with PMTs, preamps, bases
- LED & Preamp pulsers
- High & Low voltage systems
- Cabling, cabling, cabling

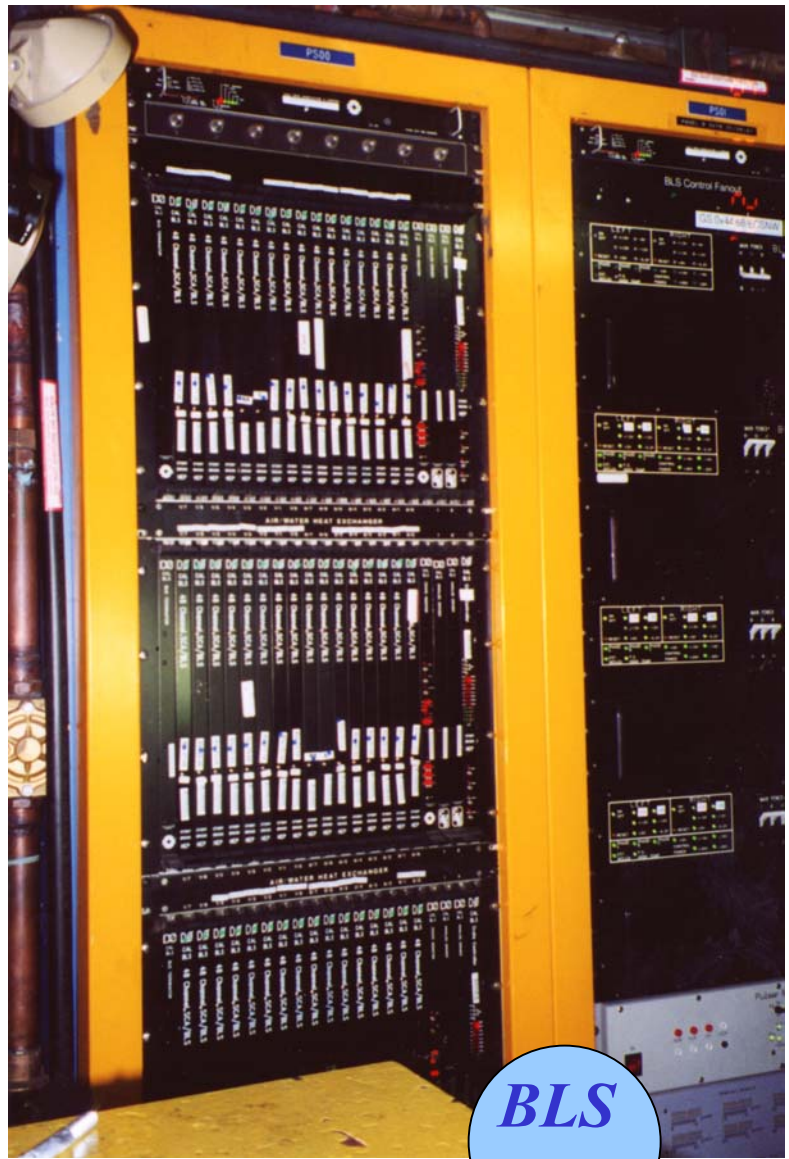


ICD Commissioning

- Signal: *live* or *dead*?
- Channel mapping
  - ICD < 400 channels in the Calorimeter system of > 50,000 channels!
  - Electronics address to physics address translation
  - *Feature* in signal interface between electronics drawers & the signal ribbon cable *(fixed)*
  - *Feature* in NE & SW fiber backplane mapping *(fixed)*
- Timing studies
  - ICD signal is faster
- Calibration system
  - LED & Preamp Pulser
- Documentation!
  - Hardware map
  - Shifter instructions
  - LED pulser interface
  - High voltage system
  - LV safety review
  - Photographs
  - Web page

Calorimeter Commissioning

- Control Room shifts
  - Expert user, shape the documentation & user guide
- ICD Comm = Cal Comm
  - ICD channels sprinkled throughout Cal readout
  - Found & help fixed timing, gain & pedestal problems
- SCA & Preamp noise
  - Discovered L1SCA up/down feature & L2 SCA anomalies
    - Affected ~ 1/3 channels!
  - Located noisy preamps
    - One-percent effect



That's me

Data Acquisition Expert

- On-call troubleshooter
  - Countless number of control room shifts!
  - Expert user
- Co-leader DAQ Shifter group & weekly mtgs
- Web page & docs

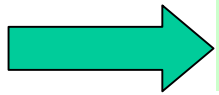
- Shift schedule & training → about 15 people/month
  - Rotating pool or shifters & constantly evolving DAQ system
- Developed Control Room procedures
  - Checklists, Captain instructions, data quality/quantity

Missing Transverse Energy

- Primary author on D0 packages for MET
- missingET main algorithms to calculate MET objects from reconstructed data/MC
  - Calorimeter cells/towers & tight muons
  - Energy thresholds & eta limits
  - "Hot" cell & ICD contribution
  - Eta Rings for revertexing *(secondary,tertiary)*
- met_analyze D0 reco framework package that produces an Ntuple for MET
  - recent addition (Feb 2002)

Electroweak Physics

- Greater luminosity & higher energy
  - Increased L: $0.1\ fb^{-1} \rightarrow 2.0\ fb^{-1}$
  - Increased $\sqrt{s}$: $1.8\ GeV \rightarrow 1.96\ GeV$



Projected

- Upgraded detector
  - Faster CAL electronics, improved muon ID, preshower, inner tracking, 2T solenoid
- First year data goal: W & Z cross section estimates
  - Electron & muon tags ($Z \rightarrow ll$, $W \rightarrow e\nu$)
- Longer term focus *(starting with Monte Carlo)*
  - Precision measurement of W mass
  - Weak Boson Asymmetries
  - Anomalous Gauge Boson Couplings

Preferred longer term analysis plans

Plans for Next Year

- ICD Maintenance *(remain expert on-call)*
  - Replace bad PMTs, marginal electronics & cables
    - 44 new PMTs being tested (UTA) – 50 more ordered
    - Building six complete spare electronics drawers at D0
- D0 Notes: *Permanent* documentation of effort
  - ICD mapping; ICD timing; LED calibration; LV Safety; MET
- DAQ & Online System Expert
  - Supervise data quality through improved procedure, automation, training, software
- Missing ET: part-time, C++, D0 code environment
- EW Physics Analysis: Increased effort ~1/3 time
  - Work with resident D0 grad students to develop & complete publications & theses (1-2 year time scale)
- Talks & Conferences
  - All Experimenters' Meeting (Fermilab – 18 March 2002): D0 status
  - DPF (May 2002): *Run 2 Electroweak Physics Prospects at D0*